

LEGEND								
Item #	Item	Surface Area (ft²)	Cut (ft)	Fill (ft)	Cut Volume (ft³)	Cut Volume (yd³)	Fill Volume (ft³)	Fill Volume (yd³)
1	Toll booth	1,302	2	—	2,604	96	—	—
2	Park	7,615	2	—	15,230	564	—	—
3	Bulkhead	1,843	3	—	5,529	205	—	—
4	Exit lanes	15,516	—	1.5	—	—	23,274	862
5	Drainage vault	144	10	—	1,440	53	—	—
6	Remote holding (SR 20)	8,124	1.5	—	12,186	451	—	—
7	Bike Path	4,850	1	—	4,850	180	—	—
8	Signal pole foundations	13	15	—	189	7	—	—
TOTAL						1,557		862

Figure 4
Excavation and Fill Volumes

B. ENVIRONMENTAL ELEMENTS

During operation of the ferry terminal and remote holding area, typical transportation-related pollutants would be generated. These include carbon monoxide, carbon dioxide, particulate matter, ozone and the ozone precursors, VOCs, and nitrous oxides. The levels of these pollutants would be similar to levels that would occur without the project.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Fugitive dust emissions would be controlled by using some or all of the following actions:

- Spray exposed soil with water or other suppressant to reduce emissions of particulate matter (PM₁₀) and deposition of particulate matter.
- Use phased development to keep disturbed areas to a minimum.
- Use wind fencing to reduce disturbance to soils.
- Minimize dust emissions during transport of fill material or soil by wetting down or by ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks.
- Promptly clean up spills of transported material on public roads.
- Schedule work tasks to minimize disruption of the existing vehicle traffic on streets.
- Restrict traffic onsite to reduce soil upheaval and the transport of material to roadways.
- Locate construction equipment and truck staging areas away from sensitive receptors as practical and in consideration of potential effects on other resources.
- Provide wheel washers to remove particulate matter that would otherwise be carried offsite by vehicles in order to decrease deposition of particulate matter on area roadways.
- Cover dirt, gravel, and debris piles as needed to reduce dust and wind-blown debris.
- Minimize odors onsite by covering loads of hot asphalt.

Emissions of particulate matter, VOCs, nitrous oxides, sulfur dioxide, and carbon monoxide would be minimized whenever reasonable and possible. Since these emissions primarily result from construction equipment, machinery engines would be kept in good mechanical condition to minimize exhaust emissions.

Mitigation proposed for minimizing traffic effects would also serve to mitigate air quality effects (see response to question 14.g).

3. Water**a. Surface:**

B. ENVIRONMENTAL ELEMENTS

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

The Port Townsend ferry terminal is on the shore of Port Townsend Bay, which is connected to Puget Sound via Admiralty Inlet.

Kah Tai Lagoon is a freshwater body approximately 500 feet north of the new remote holding area. This water body is brackish due to inflow of marine water from Port Townsend Bay. Stormwater from a sizable portion of the city of Port Townsend drains to this lagoon before discharging into the bay.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

The ferry terminal improvements would require work over, in, and adjacent to Port Townsend Bay. Over-water and in-water work would include:

- Replacement of creosote-treated timber dolphins and wingwalls
- Extension of the trestle and construction of new slips and transfer spans
- If the 124- to 144-car vessel is assigned to the route, dredging of 13,000 cubic yards of soil from the area in front of the trestle extension
- Partial filling of the publicly managed portion of the borrow pit east of the terminal with clean imported material, and recolonization with eelgrass

See Figure 1.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

If the 124- to 144-car vessel is assigned to the route, off-shore dredging would be required. Approximately 13,000 cubic yards of sediment would be dredged from the area in front of the trestle extension. This material would be deposited as a base in the offshore half of the borrow pit northeast of the trestle. No dredging would be required for either the smallest or mid-size vessel.

The subtidal borrow pit northeast of the terminal is on both private land and public land. The half of the pit closest to the shoreline is privately owned. The half of the pit further offshore is managed by the Washington State Department of Natural Resources. WSF intends to fill the publicly managed portion of the pit from the minus 28-foot to minus 14-foot mean lower low water (MLLW) elevation to match the adjacent seabed. This fill would create at least 0.78 acre of land suitable for replanting and recolonization with eelgrass. We will coordinate with the USACE on potential beneficial reuse of clean, noncontaminated materials from dredging projects in the Puget Sound area.

Dredge material placement in the borrow pit would be conducted using techniques that would prevent the burial of eelgrass in adjacent eelgrass beds. These would include the use of a bottom-dumping barge discharged at low tide and later use of more precise sediment delivery during the final stages of filling operations (e.g., using a clam shell, "telebelt", or comparable technology).

B. ENVIRONMENTAL ELEMENTS

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

The ferry terminal is not located in a 100-year floodplain (see Figure 3).

Based on the 1982 FEMA Flood maps for Port Townsend, the new remote holding area is within a Type AO flood zone. Zone AO is the flood insurance rate zone that corresponds to the areas of 100-year shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

There would be no intentional discharges of waste materials to surface waters. The removal of 410 creosote-treated pilings would create the potential for the release of creosote into the water column. This would be a very short-term impact as the water currents would disperse the contaminant, which is a slow-acting toxicant. The suspended sediment and associated turbidity during piling extraction and installation would be low. Water quality parameters monitored during a Navy pier replacement at Manchester, Washington, showed that turbidity was typically less than 1 turbidity unit higher than background levels. This means that turbidity elevation was barely measurable. As such, the effects of turbidity from piling removal and pile driving are expected to be negligible.

There may be some water quality effects occurring on the land adjacent to the ferry terminal that might introduce additional suspended solids to Port Townsend Bay near the Ferry Terminal during the construction of a new parking lot and a park. Runoff from disturbed areas or temporary sumps could carry sediment to Port Townsend Bay, causing short-term water quality degradation.

At the remote vehicle holding area, placement of silt fencing, catch basin inserts, and other erosion-control BMPs would minimize the effect of construction runoff at both the remote vehicle holding area and the ferry terminal. Any water generated through dewatering activities would be routed through a settling pond or Baker tank to reduce suspended sediment prior to discharge.

b. Ground:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.**

No

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.).**

None

Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

B. ENVIRONMENTAL ELEMENTS

Not applicable

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

Stormwater currently runs off from the existing terminal, passes through an oil-water separator, and is then discharged into the City of Port Townsend's storm drain system, which discharges into Port Townsend Bay. The Proposed Action would provide a more effective level of oil treatment that complies with the *WSDOT Highway Runoff Manual* (WSDOT, 2005) and the treatment would be applied to all existing terminal surfaces and all new impervious surfaces except for the new transfer spans. The stormwater treatment at the terminal would be provided in a buried concrete vault with a water quality treatment volume of 0.35 acre-foot. This vault would be located at the southwest corner of the relocated Rotary Park. The treated water from the terminal would be discharged to Port Townsend Bay. Pervious pavement would be used to infiltrate and treat stormwater generated by the remote holding lanes. Another option to be considered during detailed design is a biofiltration swale. Treated runoff would flow to a nearby marina and Port Townsend Bay. See the Description of the Proposed Action for more detail about stormwater treatment.

The stormwater on the transfer spans is not currently captured, nor would it be captured in the future improvements, by the stormwater system due to the impracticality of capturing runoff from a movable ramp with variable slope.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.**

No waste materials would enter groundwater.

Some water quality effects could occur during construction that might introduce additional suspended solids to Port Townsend Bay. Runoff from disturbed areas or temporary sumps could carry sediment to Port Townsend Bay, causing short-term water quality degradation. See response to question 3.a.6 above.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:**Conservation Measures**

There are a number of conservation measures that would be incorporated into the project design to protect water quality.

During project construction, effective erosion-control BMPs would be implemented to minimize the possibility of contaminants reaching marine waters. These BMPs would include silt fences, catch basin inserts, and settling or other treatment of construction runoff and dewatering water prior to discharge from the construction site. These measures would assure that minimal amounts of sediment are transported to adjacent marine waters. The BMPs would be inspected on a regular basis to ensure that they are performing properly.

During project operation, stormwater runoff would receive basic water quality treatment, resulting in a net improvement in water quality over that of existing conditions.

The new remote holding area would be created by adding two 750-foot-long holding lanes south of SR 20. One lane would use the existing paved south shoulder (also currently used as a bike lane), and the

B. ENVIRONMENTAL ELEMENTS

other would be constructed of pervious paving materials to reduce stormwater runoff.

Construction Mitigation

The marine sediments would be tested in any areas that would be disturbed by the project. If contaminants were found, these sediments would be properly removed to minimize the potential for introducing contaminants into the water.

Dredging would be carried out using an enclosed clamshell bucket to minimize the amount of sediment loss from the bucket as it transfers the material into the barge. A split-hull barge would be used to place the dredged material. This type of barge has a hinged bottom which opens and drops the material through the water column. To minimize the spread of the material, the barge would be operated only during slack tide when the currents are minimal. These measures would limit the spread of silty material (turbidity) and redeposition in the area immediately around the dredged location. Further information can be found in the *Fisheries Discipline Report* and the *Marine Waterways and Hydrological Systems Discipline Report*.

The contractor will be required to have a stormwater pollution prevention plan (SWPPP) and a spill prevention, control, and countermeasures (SPCC) plan.

For a complete list of all proposed environmental mitigation commitments, see the supporting document entitled "Environmental Commitment List."

Operational Mitigation

No operational mitigation is required.

4. Plants**a. Check or circle types of vegetation found on the site:**

- Trees: poplars, ornamental trees in Rotary Park such as Mugo pine
- Shrubs: ornamental shrubs in Rotary Park such as azalea and heather
- Grass: turf grass and ornamental grasses
- Water plants: eelgrass, macroalgae

Two types of habitats are found within the footprint of proposed construction: **urban and mixed environs habitat** (landscaped parks, lawns, and other vegetation interspersed with developed areas) and **marine habitat**. The predominant terrestrial habitat type found in the study area is urban and mixed environs, which is characterized by a high level (more than 60 percent cover) of impervious surfaces, such as pavement and buildings. Vegetation is composed of non-native and native species limited to lawn and landscape strips and isolated patches of unmaintained scrub vegetation.

The marine habitat includes both nearshore habitat (between the high tide line and approximately 70 to 90 feet in depth) and deeper waters.

Freshwater wetlands are present within Kah Tai Nature Park, 0.5 mile from the project construction limits at the remote holding area. No freshwater wetlands are present in the project construction area. Estuarine wetlands are present in the undeveloped shoreline area west of the ferry terminal (Figure 5). No wetlands in the project vicinity would be affected by the Proposed Action.

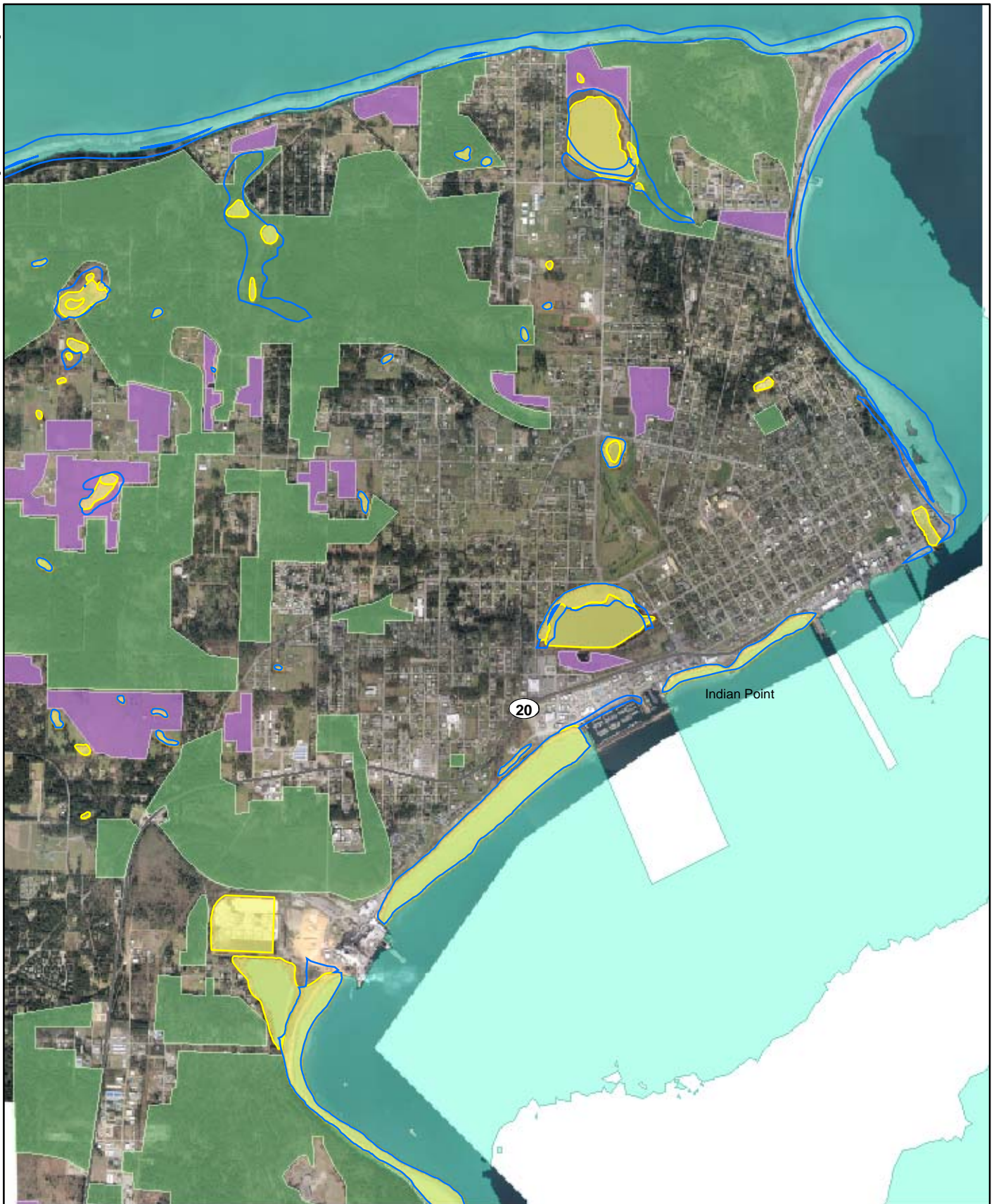


Figure 5
Wildlife Habitat in the Study Area

B. ENVIRONMENTAL ELEMENTS

b. What kind and amount of vegetation will be removed or altered?

Landscaping in Rotary Park (a .1-acre park currently located east of the terminal entrance) would be removed due to the expansion of the terminal and relocated to the new park west of the terminal.

The proposed project would eliminate about 1,905 square feet of eelgrass at the southwest corner of the existing trestle due to shading.

c. List threatened or endangered species known to be on or near the site.

There are no threatened or endangered plant species on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

There is currently little native vegetation on the project site. Ornamental plants would be used to landscape the new Rotary Park to be built to the west of the terminal entrance. These may include some native plants.

Eelgrass loss would be mitigated by eelgrass restoration in the borrow pit immediately to the northeast of the terminal. This recolonization area would yield .78 acre of new eelgrass habitat. For a complete list of all proposed environmental mitigation commitments, see the supporting document entitled "Environmental Commitment List."

5. Animals**a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:**

Birds: bald eagle, songbirds, killdeer, crow, gull, blackbird, grebe, merganser, scoter, cormorant, guillemot, turnstone, kingfisher, common loon, brant, mallard, Canada goose, common murre, harlequin duck, great blue heron, murrelets

Mammals: gray squirrel, mouse, rat, raccoon, Virginia opossum, coyote, river otter, mink, seal, sea lion, porpoise, gray whale, minke whale, killer whale

Fish: salmon, forage fish, demersal fish, geoducks, Dungeness crab, shrimp, marine invertebrates

Wildlife species observed by project team biologists in **urban and mixed environs habitat** during site investigations include crow, glaucous-winged gull, rock dove, house finch, and house sparrow. A pair of bald eagles was observed soaring over the ferry terminal and above the bluffs adjacent to SR 20. Other wildlife species likely to use this habitat type in the study area include song sparrow, white-crowned sparrow, Bewick's wren, Brewer's blackbird, eastern gray squirrel, house mouse, Norway and black rat, raccoon, Virginia opossum, and coyote.

Marine habitat on or near the site is used by a variety of bird species. Species that were observed during field investigations in marine habitat in the project limits included horned grebe, red-necked grebe, red-breasted merganser, surf scoter, double-crested cormorant, pelagic cormorant, pigeon guillemot, mew gull, black turnstone, and belted kingfisher. Other species that are likely to use the marine habitat of the project limits include river otter, mink, common loon, brant, mallard, murrelets, Canada goose, common murre, harlequin duck, killdeer, and great blue heron. Marine mammals that might use marine habitat in Port Townsend Bay include harbor seal, California sea lion, Steller sea lion, harbor porpoise, Dall's porpoise, gray whale, minke whale, and killer whale.

Most species of anadromous salmonids are expected to be found in Port Townsend Bay seasonally as juveniles and, for some species, as adults. Resident Chinook salmon as well as resident coho salmon

B. ENVIRONMENTAL ELEMENTS

can be found in the bay all year long. Many of the juvenile salmonids migrating north out of Puget Sound spend some time in the bay; this is especially true for the species that are smaller during their early marine rearing stage, such as Chinook salmon, pink salmon, and chum salmon. Fish that are likely to spend the most time in Port Townsend nearshore areas are the chum salmon smolts from Chimacum Creek, which has recently benefited from significant habitat restoration.

Bull trout are not expected to be present in Port Townsend Bay. Their designated Critical Habitat (50 CFR 17 Vol. 70, No. 185) does not include the waters in Port Townsend Bay.

Port Townsend Bay and Kilisut Harbor are important spawning areas for three species of forage fish: Pacific herring, sand lance, and surf smelt. Herring and surf smelt spawn primarily in Kilisut Harbor approximately 2 miles southeast of the ferry terminal. Sand lance are known to use a number of beaches for spawning in Port Townsend Bay and Kilisut Harbor, including the beach west of the ferry terminal. Sand lance spawning in Puget Sound occurs annually from the beginning of November through mid-February.



Port Townsend Bay supports a wide variety of demersal fish (fish that live near or on the seafloor). From 1991 to 2001 the Port Townsend Marine Science Center and Marine Resource Consultants conducted otter trawl surveys in 15 locations in Port Townsend Bay in June of each year. A total of 73 species was caught. The most abundant species (by a wide margin) was Pacific tomcod. The top 10 species, in terms of numerical abundance, represented 90 percent of the total.

Construction effects from the project would result from piling removal, pile driving, and turbidity. The effects of turbidity from piling removal and pile driving can be considered to be negligible. The removal of creosote-treated pilings would be beneficial, and the long-term benefits would far outweigh the short-term effects of small creosote releases.

About one third of the pilings, including all of the larger pilings, would be installed entirely with a vibratory hammer. The other two thirds of the pilings would be initially driven with a vibratory hammer to refusal, then proofed with an impact hammer. The use of a vibratory hammer is thought to have a much lower effect on marine life than using an impact hammer. Pile driving with an impact hammer has the potential to kill fish and affect fish behavior. Pile driving may harm marine diving birds and mammals.

Potential effects of pile driving on salmonids would be minimized greatly due to regulatory processes and salmon physiology, and would likely be minimal. Salmonids' physiology reduces their vulnerability to impulsive sound energy. Potential effects of pile driving on diving birds and marine mammals would be minimized by adherence to timing restrictions for construction activities and other mitigation measures.

Adult sand lance are not likely to be injured by pile-driving noise because they have no swim bladder. Fish without swim bladders are highly resistant to impulsive sound energy such as pile-driving noise. The impact of pile-driving noise on sand lance eggs is unknown.

b. List any threatened or endangered species known to be on or near the site.

Bald eagle and marbled murrelet could possibly be present within the project vicinity. Several marine mammals—Southern Resident Population killer whales, humpback whale, and Steller sea lion—could possibly be present within the project study area. All of these species are listed as endangered or threatened under the Endangered Species Act (ESA). Two species of fish in the study area are federally listed and protected under the ESA, one species is proposed for listing, and one species is

B. ENVIRONMENTAL ELEMENTS

designated as a species of concern (Table 1).

TABLE 1. LISTED SPECIES THAT MAY OCCUR IN THE STUDY AREA			
Common Name	Scientific Name	Federal Status	State Status
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened	Threatened
Marbled murrelet	<i>Brachyramphus marmoratus</i>	Threatened	Threatened
Southern Resident Population killer whales	<i>Orcinus orca</i>	Endangered	Endangered
Humpback whale	<i>Megaptera novaeangliae</i>	Endangered	Endangered
Steller sea lion	<i>Eumetopias jubatus</i>	Threatened	Threatened
Chinook salmon (Puget Sound ESU)	<i>Oncorhynchus tshawytscha</i>	Threatened	Candidate
Chum salmon (Hood Canal summer-run ESU)	<i>Oncorhynchus keta</i>	Threatened	Candidate
Steelhead trout (Puget Sound)	<i>Oncorhynchus mykiss</i>	Proposed	None
Coho salmon (Puget Sound/Strait of Georgia ESU)	<i>Oncorhynchus kisutch</i>	Species of Concern	None
ESU = evolutionarily significant unit			

The WDFW Priority Habitats and Species Program (PHS) database identifies several bald eagle nests sharing three territories within 7 miles of the project limits. The closest nest is located approximately 1.4 miles west of the project footprint and does not have a line of sight of the project limits. The nest was documented as active in 2002. Two nests occur approximately 1.7 miles north of the project limits within one mapped territory, and these nests were documented as active in 2000 and 2002. A third territory is present approximately 2.6 miles west of the project limits and contains one nest noted as active in 1995. Because the closest known nest is beyond 1 mile, and not within line-of-sight, pile driving or other construction noise and activity would not substantially affect bald eagles at the nest. Nesting activities would not be affected because pile driving would occur outside of the nesting season. Bald eagles foraging within 1.8 miles during pile proofing activities may be disrupted or displaced. Eagles would likely avoid foraging in the study area during construction. However, eagles currently using the area are tolerant of boat traffic and other noise associated with the ferry terminal, and may continue to use the project vicinity when other, less disruptive construction activities are occurring. The study area represents a small portion of the overall bald eagle foraging territory, and construction is unlikely to substantially affect foraging bald eagles.

Marbled murrelets are unlikely to nest within the study area because suitable nest trees do not exist in forested areas within 3 miles or more of the project limits. Murrelets may forage in waters within the

B. ENVIRONMENTAL ELEMENTS

project vicinity.

The potential effects on Southern Resident Population killer whales from the Proposed Action include noise from pile driving and effects on the whales' prey (salmonids). Construction effects on killer whales would be minimized by the BMPs and mitigation measures employed to protect fish resources (see the Fisheries Discipline Report). Effects on proposed critical habitat for Southern Resident Population killer whales are limited to effects on prey species, water quality, and passage conditions; sound levels have been excluded from proposed critical habitat primary constituent elements (PCEs) while additional information is gathered. Effects to prey species (salmonids) would be minimized by the BMPs and mitigation measures employed to protect fish resources. Compliance with project NPDES permit conditions would minimize impacts to water quality in the project area. Passage conditions within the project area would remain similar to existing conditions until 2010; between 2010 and 2030 the level of ferry operation is forecast to increase from 15 to approximately 20 runs daily, which would slightly increase passage issues within the critical habitat area.

Humpback whales are not expected to occur within the study area during proposed project in-water construction (October to February), as they move to tropical waters during this period for calving and breeding.

The potential effects on Steller sea lion from the construction of the Proposed Action include noise from pile driving. However, direct effects to Steller sea lion are unlikely given their low incidence in the project vicinity.

Puget Sound Chinook salmon are expected to be found seasonally as migrant juveniles and throughout the year as immature sub-adults in the study area. Hood Canal summer chum salmon are expected to be present seasonally as migrant juveniles and adults. There is a run of Hood Canal summer chum in Chimacum Creek at the south end of Port Townsend Bay. Other rivers in Hood Canal may produce summer chum that could enter and spend some time in the bay during their migration out to sea. Potential construction-related effects include turbidity, suspended sediment deposition, release of creosote into the water column, and pile-driving noise. All effects but those of pile driving would be temporary with minor or negligible effects. Effects of pile driving would also be temporary but more substantial in nature. Potential operational effects include increased shading of the seafloor, loss of eelgrass by shading, alteration of habitat by propeller wash scour and shell hash deposition, loss of seafloor due to piling placement, and diversion of juvenile salmonids further offshore than existing conditions. These effects would all be minor or negligible.

c. Is the site part of a migration route? If so, explain.

The ferry terminal's offshore area could be used by migrating salmon in Port Townsend Bay. See response to question 5.b above.

The project site is located along the Pacific Flyway, a broad area along the Pacific coast used by large numbers of avian species in migration between the Arctic and warmer wintering grounds.

The Pacific coast of Washington is also used by migratory marine mammals. Although inner waters, such as those in the vicinity of the project, are less likely to be used than the outer coast, some migratory gray, humpback, and killer whales may occasionally use these waters during migration.

d. Proposed measures to preserve or enhance wildlife, if any:

Eelgrass restoration would benefit salmon and the wildlife species that forage on salmon; refer to question 4.d and the *Fisheries Discipline Report* for a description of eelgrass mitigation.

Existing creosote-treated timber-piles would be replaced with steel piles, which would improve the

B. ENVIRONMENTAL ELEMENTS

water quality and marine habitat in the vicinity of the ferry terminal. New stormwater treatment would also improve water quality.

Strategies to introduce light under the trestle would be implemented to encourage fish passage along the shoreline. Such strategies may include providing solar tubes, using fiber optic tubes that would run under the pier, and installing reflective surfaces under the trestle.

The primary mitigation measure to minimize effects on marine species would be compliance with the in-water work windows for wildlife as specified by NOAA Fisheries, the WDFW, and USFWS. Measures to minimize the effects of pile driving on marine species include:

- Adhere to timing restrictions such as in-water work windows. Potential pile-driving effects on juvenile salmonids would be greatly minimized through in-water construction timing restrictions.
- Use bubble curtains or other sound attenuation devices for impact pile driving of steel piles.
- Assign a Washington State Ferries inspector to the project to ensure contract and permit compliance.
- Ramp up noise gradually to warn marine mammals and birds of impending impact pile driving.

For a complete list of all proposed environmental mitigation commitments, see the supporting document entitled "Environmental Commitment List."

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Energy would be consumed by ferry users, by the ferry vessels, and by the ferry terminal during operation of the completed project. The energy sources would be gasoline, diesel, and possibly other sources to run passenger vehicles; diesel fuel to run the ferries; and electricity to run the ferry terminal buildings, transfer spans, and exterior lighting.

WSF calculated the total amount of energy consumed in the study area under the Proposed Action. Estimates of vehicle (ferry passenger) fuel consumption showed little differences between the vessel options. No operational mitigation measures are anticipated because each of the Proposed Action vessel options, with respect to energy generated by vehicles in the study area, results in net savings in energy consumption when compared to the No Build Alternative.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Construction plans would make every attempt to minimize roadway congestion and would adhere to construction practices that encourage efficient energy use, such as limiting idling equipment, encouraging carpooling of construction workers, and locating staging areas near work sites.

B. ENVIRONMENTAL ELEMENTS

7. Environmental health**a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.**

Construction activities for the proposal could result in several types of effects related to hazardous materials. The potential effects are as follows:

- Contaminated soil and groundwater may be encountered or removed during construction.
- Air quality could be affected by release of contaminants and dust during construction and handling of contaminated media resulting in worker and public exposure.
- Potentially hazardous materials such as creosote-treated timber pilings would be generated.
- Hazardous building materials (primarily asbestos and lead-based paint) could be released to the environment as a result of demolition.
- Encountering previously unidentified product pipelines related to the operation of the former Chevron Bulk Fuel Terminal could result in releases to the environment. These pipelines are known to exist under Water Street.
- Potentially contaminated sediment could be disturbed if the sediments are dredged (if the largest ferry vessel is selected). While the extent of any contamination is unknown, sediments have the potential (based on current information) to be contaminated due to the historical presence of the Standard Oil dock and releases of polynuclear aromatic hydrocarbons (PAHs) from creosote-treated pilings.
- Accidental releases of hazardous substances during construction, a hazard common to all construction projects, are particularly acute for construction over water or with stormwater runoff to Port Townsend Bay.

Property acquisition associated with the Proposed Action includes the City-owned parking lot adjacent to the US Bank and Rotary Park. This property has the potential to be contaminated due to possible historical releases from the adjacent former Chevron Bulk Fuel Terminal. ChevronTexaco is currently conducting a remedial investigation at the former Chevron Bulk Fuel Terminal located on the north side of Water Street and at the parking lot of the US Bank and Rotary Park under the voluntary cleanup program administered by Ecology under the Model Toxics Control Act (MTCA). In acquiring a contaminated property, WSF could become liable for site cleanup. RCW 70-105D.040 identifies persons liable for facility/property remediation as the current or past property owner/operator. In situations where there is more than one liable party, each party is jointly and severally liable for costs associated with cleanup of a site and costs to repair damages to natural resources.

1) Describe special emergency services that might be required.

None

2) Proposed measures to reduce or control environmental health hazards, if any:

The following are mitigation measures for the seven potential effects listed in question 7a:

- Mitigation measures for the removal of contaminated soil and groundwater would include requiring the construction contractor to have a soil construction contingency plan, a stormwater pollution prevention plan, and a spill prevention, control, and

B. ENVIRONMENTAL ELEMENTS

countermeasures plan, and to be familiar with the Washington State Department of Ecology's Guidance for Remediation of Petroleum Contaminated Soils (Washington State Department of Ecology, 1995). These documents would help to identify procedures, chains of responsibility, and concentration levels requiring cleanup in the event contaminated soil is encountered. The development of the SWPPP would assist in the handling of contaminated groundwater. It addresses the procedures, equipment, and materials necessary to avoid erosion during excavation or soil stockpiling. It also addresses the diversion of stormwater, surface water, or groundwater that seeps into an excavation.

- The use of personal protective equipment, contingency planning, and secondary containment for hazardous material would be required for contractors. Public access to the project construction zone would be restricted.
- Potential exemptions as dangerous waste are available for treated wood if it is a state-only dangerous waste. The replacement of the creosote-treated pilings with steel structures would result in improved surface water and sediment qualities.
- Preconstruction investigation and testing would be needed to determine the presence and quantities of these hazardous building materials so that these materials can be appropriately abated prior to demolition.
- Mitigation measures would include pre-construction planning such as conducting geophysical surveys prior to utility trenching work, preparing an SWPPP and an SPCC plan, and planning for contracting contingencies for removal and disposal of product pipelines or contaminated soil.
- Sediment characterization would occur prior to construction to support design and permitting requirements. Based on the results from sediment characterization, the dredged sediments would be disposed of according to applicable regulations.
- The development of a stormwater pollution prevention plan, an SPCC plan, and the implementation of best management practices for runoff from the construction site would be required.

During the operation of the project, the potential for hazardous material spills from transport trucks would be reduced as a result of the improved traffic flow in the study area.

In order to minimize long-term liability associated with the acquisition of the City-owned parking lot of the US Bank and Rotary Park, WSF will enter into discussions with WDOE, the City as property owner, and ChevronTexaco regarding the scope and extent of the ongoing investigation. By engaging WDOE, the City, and ChevronTexaco at this time, WSF would then have the opportunity to verify that the remedial investigation and subsequent remedial cleanup actions, if any, were conducted in a manner that would minimize the WSF's long-term liability associated with the acquisition of the property. WSF will also perform "all appropriate inquiry" as required under Section 101(35)(B)(ii) and (iii) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, prior to obtaining the property. If the inquiry identifies soil and/or groundwater contamination that has not already been remediated by ChevronTexaco under the voluntary cleanup program, WSF may then pursue a right of action with the City and/or ChevronTexaco for cost associated with cleanup of the property and cost to repair damages to natural resources, if necessary.

b. Noise

B. ENVIRONMENTAL ELEMENTS

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

A noise analysis identified sensitive receptors that represent residential properties in the study area. Background noise level measurements were obtained and future noise levels were predicted at these locations for the future No Build Alternative and Proposed Action. The noise analysis used procedures, noise prediction software, and impact criteria developed by the Federal Highway Administration (FHWA) to assess noise impacts from changes to local streets and vehicular traffic generated by the Proposed Action. Federal Transit Administration (FTA) guidelines were used to analyze impacts at the vehicle holding areas since they operate much like park-and-ride lots, which are best analyzed using the FTA noise analysis tool. The future predicted noise levels from the No Build Alternative and Proposed Action were compared to determine whether there would be a substantial increase in noise levels.

Maximum environmental noise levels are discussed in Chapter 173-60 of the Washington Administrative Code (WAC). This chapter, Section 173-60-110, Cooperation with Local Government, states "the department (Ecology) conceives the function of noise abatement and control to be primarily the role of local government and intends actively to encourage local government to adopt measures for noise abatement and control." The City of Port Townsend has adopted a Noise Ordinance (Section 9.09.040), which exempts from regulation "sound created by construction activity or equipment, including special construction vehicles (such being any vehicle which is designed and used primarily for grading, paving, earthmoving, and other construction work), and emanating from temporary construction sites." However, a City construction permit, where required, must be issued prior to such construction and the terms of the permit may limit the hours of construction work.

During the construction phase, noise levels would temporarily increase near construction sites due to heavy equipment use and construction materials transport. Noise levels generated during construction vary widely, reflecting the differences in site conditions and construction phases. During some phases, for example, equipment may not operate or may sit idle for long periods of time.

High noise levels can be expected at locations close to the project during certain phases of construction. FHWA's Roadway Construction Noise Model was used to identify the construction activities with the greatest potential for noise impacts at nearby commercial and residential sites. The closest commercial site is a bank approximately 80 feet northeast of the terminal. Noise levels would range from 45 a-weighted decibels (dBA) to 97 dBA. The closest residential site is located on top of a bluff approximately 625 feet northwest of the terminal. The highest noise level expected to occur at the closest residence is 79 dBA; this noise would be produced by pile-driving off-shore during the daytime.

The potential noise impacts from the operation of the expanded vehicle holding area at the terminal are shown below in Table 2. The Proposed Action at the horizon year 2030 would produce a potential 1-dBA noise increase over existing noise levels (the logarithmic addition of $41 + 46 L_{dn} = 47 L_{dn}$). This would not be considered an impact under FTA criteria.

No sensitive receptors are located near the proposed remote vehicle holding area on SR 20 and

B. ENVIRONMENTAL ELEMENTS

therefore noise levels were not assessed at that location. However, it is anticipated that the proposed remote holding area would not produce a noticeable increase in noise levels at this location.

TABLE 2. PREDICTED NOISE LEVELS DUE TO THE EXPANDED TERMINAL FOR HORIZON YEAR 2030								
Sensitive Receiver	Daytime (dBA)		Nighttime (dBA)		24-hour L_{dn} (dBA)		Existing Noise Exposure plus Project Impact (dBA L_{dn})	FTA Noise Impact Level (dBA L_{dn})
	Existing	Predicted	Existing	Predicted	Existing	Predicted		
Residential backyard (LT-1)	44	34	34	34	46	41	47	53-59
L_{dn} = Day-night noise equivalent level								

For the Proposed Action, none of the vehicle vessel capacity options being considered or the traffic patterns associated with the increased vehicle capacity of the vehicle holding areas would generate noise levels that approach or exceed the FHWA or FTA Noise Abatement Criteria.

3) Proposed measures to reduce or control noise impacts, if any:

Construction noise mitigation measures would include:

- Scheduling of construction activities between 7 AM and 7 PM during weekdays. If nighttime or weekend work is necessary, the City's construction permit would allow nighttime and weekend work and it would specify the allowable hours of work.
- Minimizing construction during the peak tourist business season or during special events and festivals.
- Planning the dump truck haul routes to minimize travel through residential areas.
- Sequencing construction to avoid the simultaneous use of multiple noisy machines.
- Using utility power rather than diesel-powered electric generators, whenever possible.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?

The current use of the project site is the Washington State Ferries Port Townsend ferry terminal and an 800-foot-long section of the state highway, SR 20.

General land use in adjacent properties includes a variety of commercial uses, including restaurants, small businesses, office space, and motels. A community park and bank are located directly adjacent to the northeast side of the Port Townsend ferry terminal, and the land directly southwest of the terminal is public shoreline adjacent to SR 20. Several retail and service businesses are directly across SR 20 from the terminal entrance/exit area.

B. ENVIRONMENTAL ELEMENTS

Land use adjacent to the new remote holding area on SR 20 includes the Boat Haven Marina to the south and Kah Tai Lagoon Park to the north.

b. Has the site been used for agriculture? If so, describe.

No

c. Describe any structures on the site.

The structures at the existing ferry terminal consist of:

- Two toll booths
- Trestle and two boat slips (transfer spans, towers, dolphins, and wingwalls)
- Ferry terminal building (wood-framed building approximately 1,500 square feet)

d. Will any structures be demolished? If so, what?

A portion of the existing trestle and the two toll booths would be demolished, as well as the two existing boat slips. All of these structures would be replaced except for the towers; the new transfer spans would be hydraulically actuated and would not require towers. The terminal building would be expanded to approximately 2,000 square feet to accommodate the increase in ferry passengers.

e. What is the current zoning classification of the site?

The land directly north and east of the ferry terminal is zoned commercial, while land to the west is zoned single family residential. The area to the southwest, however, is currently undeveloped shoreline area and is not suitable for residential development. The area north of the remote holding area is zoned Park/Open Space and Commercial, while the area south of it is zoned Marine-Related Uses.

f. What is the current comprehensive plan designation of the site?

Urban Waterfront and Gateway

g. If applicable, what is the current shoreline master program designation of the site?

Urban

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Yes. City of Port Townsend Municipal Code identifies the following environmentally sensitive areas:

1. Lands and waters with documented habitats listed in WDFW PHS Report
2. Areas with kelp and eelgrass beds
3. Herring, smelt, sand lance, and forage fish beach spawning areas
4. Marine nearshore habitat areas

i. Approximately how many people would reside or work in the completed project?

Eleven people work at the ferry terminal now, and about 13 employees (two additional) are projected to be needed in 2030. No one would reside at the terminal.

j. Approximately how many people would the completed project displace?

B. ENVIRONMENTAL ELEMENTS

The project would not displace any residences or businesses.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None required.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposal is compatible with existing and projected land uses and plans.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing would be provided.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing would be eliminated.

c. Proposed measures to reduce or control housing impacts, if any:

None required.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Currently the towers are the tallest structures onsite at about 35 feet. These towers would be removed as part of the expansion and would not be replaced. The expanded ferry terminal building would be the tallest proposed structure. It would be approximately 30 feet tall.

The principal exterior building material on the expanded terminal building and the new toll booths would be wood siding with metal roofing.

b. What views in the immediate vicinity would be altered or obstructed?

The relocation of Rotary Park during construction would temporarily remove a green vegetated area near the terminal (until the new Rotary Park is finished). However, the relocated park would be more visible to the public in its new location, and its new beach access and art pieces would make it more attractive as a recreational facility.

The Proposed Action would result in some minor permanent changes to views in the study area. The effects of the project on visual quality were assessed using FHWA's visual quality assessment method¹ by examining five representative viewpoints. The effects of the project on the representative viewpoints indicate that there would be a slight decline in visual quality at some viewpoints. For example, when the new remote holding area is full of waiting cars, there would be a decrease in the visual quality rating of this view, but the rating would still be considered average overall.

¹ FHWA.1989. Visual Impact Assessment for Highway Projects. FHWA-HI-88-054.

B. ENVIRONMENTAL ELEMENTS

c. Proposed measures to reduce or control aesthetic impacts, if any:

None

11. Light and glare**a. What type of light or glare will the proposal produce? What time of day would it mainly occur?**

Temporary light and glare effects would be related to construction activities such as night lighting (while working) and glare from equipment. Temporary effects related to construction lighting would occur during times of the year when night lighting for safety would be required. Construction at night would cease by 10:00 PM.

New overhead lights would be installed for the terminal extension and the existing overhead lights would be replaced. These lights would be operated at night. Amber navigation lights would be installed on the new steel dolphins offshore, which may be visible from some locations onshore at night.

Some additional glare could occur from the vehicles parked in the expanded holding area at the terminal. This effect would occur on sunny days, when glare from the bay would also be high.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any:

New overhead lights for the terminal extension as well as the replacement lights would be hooded and shielded so that direct light emitted above the horizontal is minimized and light would be directed to the holding area. This design would minimize light impacts on adjacent property.

12. Recreation**a. What designated and informal recreational opportunities are in the immediate vicinity?**

There is a wide range of recreational opportunities available in the study area for both passive and active recreation. Activities include walking, bicycling, fishing, kayaking, and boating. Table 3 describes the public facilities located in the study area. There are also public accesses to the waterfront within the study area. The Port of Port Townsend owns and maintains Boat Haven, a public marina providing public access over the water and along the inner marina shoreline. A number of privately operated businesses in Port Townsend provide boat rentals, tours, and charter services.

b. Would the proposed project displace any existing recreational uses? If so, describe.

During construction, Rotary Park would be closed and relocated and there may be a period of time when both the new and old Rotary Parks are not accessible to users.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The Proposed Action would relocate Rotary Park west of the ferry terminal entrance adjacent to the

B. ENVIRONMENTAL ELEMENTS

beach, making the park more visible and improving public access to the beach. Waterfront access would meet the requirements of the Americans with Disabilities Act (ADA). The relocated park may also include a beachfront sculpture of a canoe and interpretive boards to identify the tribal heritage and local history in the area.

TABLE 3. RECREATIONAL FACILITIES IN THE STUDY AREA					
Facility	Ownership	Maintained by	Size (acres)	Park Type	Amenities
Rotary Park	Port Townsend	Rotary Club ^a	0.1	Passive	Picnic table, benches, and a drinking fountain.
Shirley Browning Park	Private	Private	N/A	Passive	Bench
Gateway Park/ Soroptimist Park ^a	Port Townsend	Port Townsend Soroptimists	0.1	Passive	Bench
County Courthouse Park	Jefferson County	Jefferson County	1.1	Active	Tennis court, basketball court, and playfield.
Kah Tai Nature Park	Port Townsend ^b	Port Townsend	75 ^c	Passive	Open space wildlife park with trails, picnic tables, picnic shelter, and playground equipment.
Larry Scott Memorial Trail	Port Townsend	Port Townsend	9.2	Active	Pedestrian and bicyclist trail.
Bishop Park	Port Townsend	Port Townsend	2.5	Passive	Greenbelt park with wildlife habitat, trails, and picnic tables
^a Rotary Park and Soroptimist Park are maintained under the City's Adopt-a-Park Program. ^b The Port of Port Townsend owns 20 acres and leases the land to the City of Port Townsend ^c Kah Tai Nature Park consists of 40 acres of upland and 35 acres of water and wetlands. Source: PT Guide 2005; Jefferson County Comprehensive Plan 2004; Port Townsend Comprehensive Plan 2005; communication with Port Townsend Development Services 2006.					

During construction WSF would implement the following mitigation measures:

- WSF would identify and provide signage for detour routes for bicycle/pedestrian paths.
- Detour routes, if required, would comply with the ADA accessibility guidelines.
- Pile-driving would only be conducted within approved in-water work windows and during approved hours.
- Best management practices would be used during construction, especially in-water, to prevent any spills.
- The relocation of Rotary Park would occur during the fall and winter months when the park is least utilized by the public.

13. Historic and cultural preservation

B. ENVIRONMENTAL ELEMENTS

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

Most of the Area of Potential Effect (APE) for this project lies within the Port Townsend Historic District (PTHD) (Figure 6). The PTHD was added to the National Register of Historic Places (NRHP) in 1976, and became a National Historic Landmark in 1977. The PTHD is significant to Washington State and to the nation for its size as an intact late nineteenth century seaport community.

In the area of the PTHD and the APE southwest of the terminal, between the beach and the bluff, there is only enough room for Water Street (SR 20, a four-lane highway) and one block of development on either side. Structures in this area, although part of the PTHD, are not historically significant. All are more recent construction (1960s-present), with the exception of 1210 Water Street, which has lost significant integrity. The structures on the water side of the highway in the study area are constructed on fill material that was placed in the bay after 1950. The historic commercial structures on Water Street (SR 20) are approximately 1/2 mile northeast of the study area.

Although the original NRHP and National Historic Landmark listings did not identify historic district contributors and non-contributors, a survey of contributing structures was performed as a part of the field survey for this project. Twenty-nine contributing structures to the PTHD were identified within the project APE above the bluff and east of the terminal on Water Street. The APE also contains 22 buildings that fall within the boundaries of the PTHD that are over 45 years of age but that, because of their style or lack of historic integrity, do not qualify as “contributors” to the PTHD and are also ineligible for listing on the NRHP or Washington Register of Historic Places individually. No historic resources or buildings over 45 years of age were identified by the field surveyor within the APE and outside of the PTHD. The proposed improvements would have no physical effects on contributing structures and sites within the PTHD, and the proposed improvements would have no net visual effects on the setting of the PTHD.

The historic commercial structures of the PTHD located along Water Street, lie approximately ½ mile north of the study area. All other contributing structures within the PTHD are physically separated from the study area by the physical barrier of the bluff, and the Proposed Action would involve changes to the existing non-historic ferry terminal and facilities that would not appreciably change the view from any point in the PTHD.

No contributing structures to the district would experience long-term adverse effects as a result of the project. Short-term construction-related effects would be limited to the potential impact of increased traffic on historic commercial structures.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

No evidence of historic, archaeological, scientific, or cultural importance are known to be on or next to the site aside from the PTHD described above. There are no known/recorded traditional cultural properties in the study area. An archaeological survey was conducted at the proposed remote holding area, along the segment of SR 20 between the remote holding area and the ferry dock, and in the ferry dock area. No archaeological remains were observed on the surface. Based on the results of background research, no subsurface testing was considered necessary or attempted. Although the APE is moderately to highly sensitive for the presence of Native American and Euro-American archaeological resources, the study area has been subject to varying amounts of previous ground disturbance and placement of fill. The improvements in the Proposed Action are not anticipated to penetrate through fill layers except in very isolated and spatially limited footprints, so the likelihood of encountering NRHP-eligible archaeological resources during construction is very low.